TELEFUNKEN SERVICE

AUDIOVISION
AUDIOVISION
AUDIOVISUEL

CAMERARECORDER
VIDEO MOVIE A 895 P / VM 4000

Druck-Nr. 319 491 848

STROMLAUFPLÄNE · SCHEMATIC DIAGRAMS

Service-Hinweise

Das Laufwerk, die Videoköpfe und alle Bandführungen benötigen nach ca. 500 Betriebsstunden periodische Reinigung und Pflege, um die normale Leistungsfähigkeit zu erhalten. Die nachstehenden Service-Hinweise sind als Kurzanleitung gedacht.

Pflege und Wartung

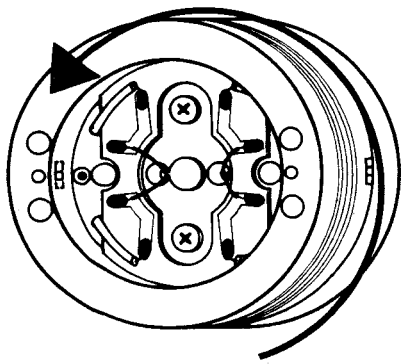
Die folgenden Teile benötigen eine periodische Reinigung und Fettung, um ihre normale Leistungsfähigkeit zu erhalten:

A. Trommelsystem

1. Die oberen und unteren Trommeln, der Löschkopf, die zwei Bandführungen und die zwei Führungsrollen müssen gelegentlich gereinigt werden. Da diese Teile direkten Kontakt mit dem Video-Band haben, nehmen sie leicht Staub an.

   Vorsicht:

   Wenn die Video-Köpfe auf der Kopftrommel gereinigt werden, sind sie nicht in senkrechter Richtung zu bearbeiten. Mit möglichst sanfter Hin- und Rückbewegung in Richtung des Bandweges die Trommel säubern, da die Köpfe aus Ferrit hergestellt sind und leicht zerbrechen können.
2. Zum Reinigen ausschließlich ein staubfreies Ledertuch benutzen, welches mit reinem Alkohol angefeuchtet wurde.
3. Nachdem die Teile mit Alkohol gereinigt wurden, sollten sie einige Zeit trocknen, bevor das Cassetten-Band benutzt wird, da der Alkohol das Band beschädigen könnte.



B. Andruckrolle und Capstan-Welle

1. Staub an der Andruckrolle oder der Capstan-Welle kann deren Funktionsfähigkeit beeinträchtigen.
2. Die Oberfläche der Andruckrolle und die Capstan-Welle sollten mit einer milden Waschmittellösung und einem staubfreien Tuch gereinigt werden.

   Achtung:

   Alkohol kann Gummi angreifen.

Service Instructions

The mechanism, the video heads and all tape guides require periodic cleaning and attention after approximately 500 operating hours to maintain the normal performance capability. The adjacent Service-Notes are to be regarded as abridged instructions.

Cleaning and maintenance

The following parts require a periodic cleaning and lubrication to retain their normal performance.

A. Drum system

1. Clean the upper and lower drums, the full erase head, the two guide poles and the two guide rollers occasionally. Since these parts make direct contact with the video tape they tend to collect dust.

   Caution:

   When cleaning the video heads on the upper drum, DO NOT clean them with vertical strokes. Use only a gentle to and fro movement in the direction of the tape travel. Take great care as the heads are made of ferrite and are very fragile.
2. For cleaning use a chamois leather moistened with pure isopropyl alcohol.
3. After cleaning with alcohol, allow the parts to dry before using a cassette tape. Alcohol can damage the tape.

Reinigung der Kopftrommel
Head drum cleaning

B. Pinch roller and capstan shaft

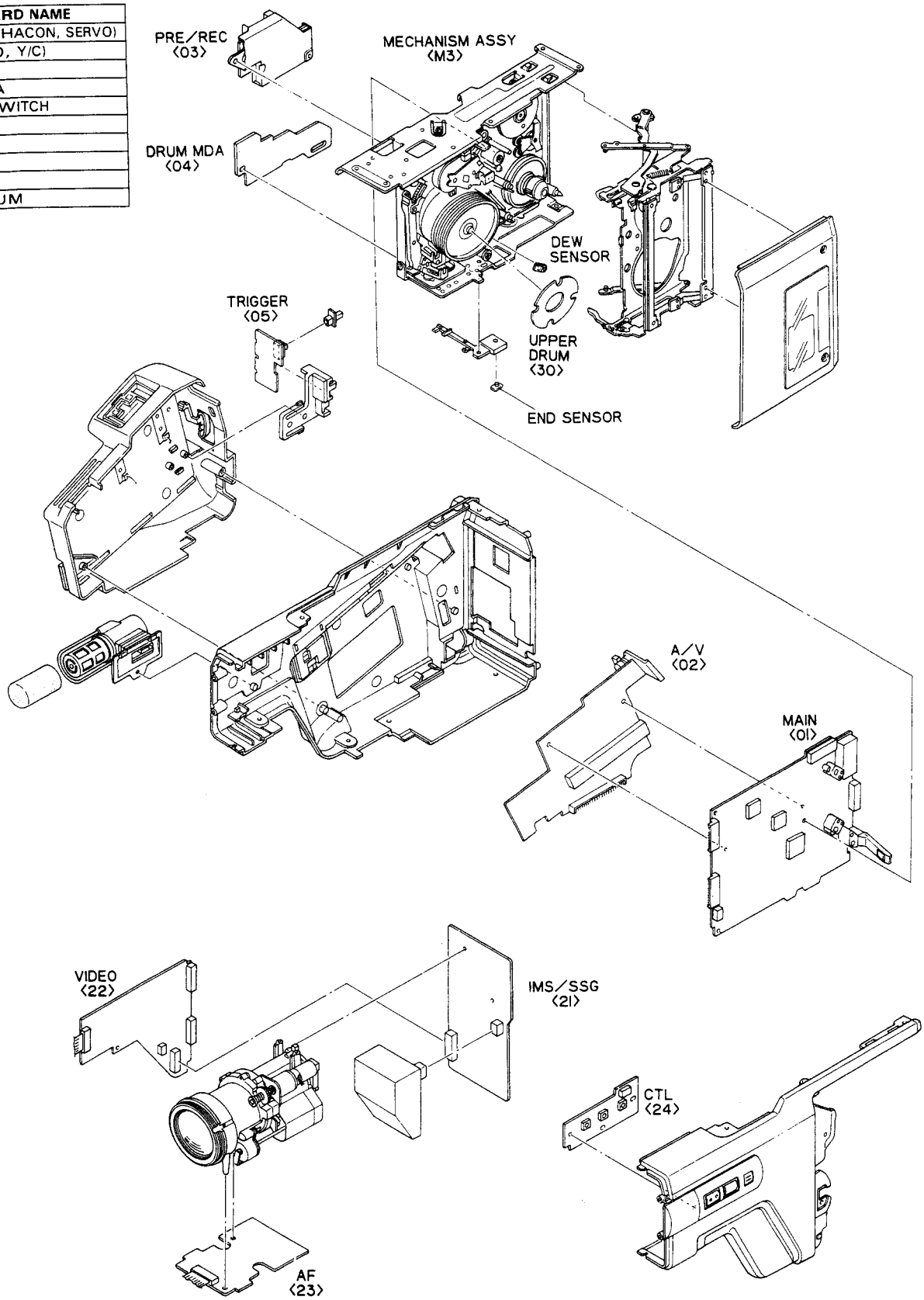
1. Dust on the pinch roller or the capstan shaft can impair their operation.
2. Clean the pinch roller surface and the capstan shaft with a mild detergent solution and a lint-free cloth.

   Note:

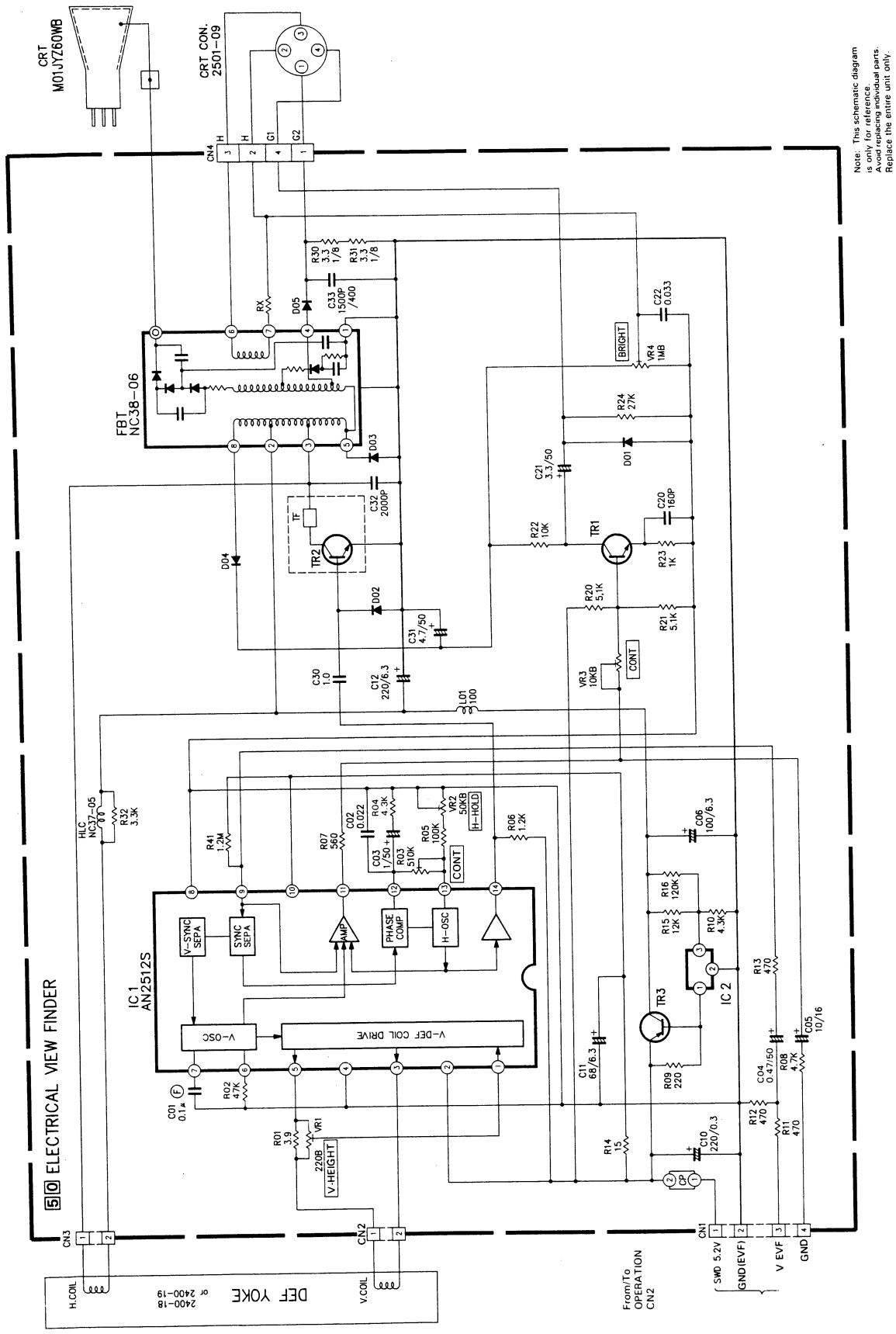
   Alcohol can cause rubber to deteriorate.

Lageplan der Leiterplatten – Circuit board locations

No.	BOARD NAME
01	MAIN (MECHACON, SERVO)
02	A/V (AUDIO, Y/C)
03	PRE/REC
04	DRUM MDA
05	TRIGGER SWITCH
21	IMS/SSG
22	VIDEO
23	AF
24	CONTROL
30	UPPER DRUM

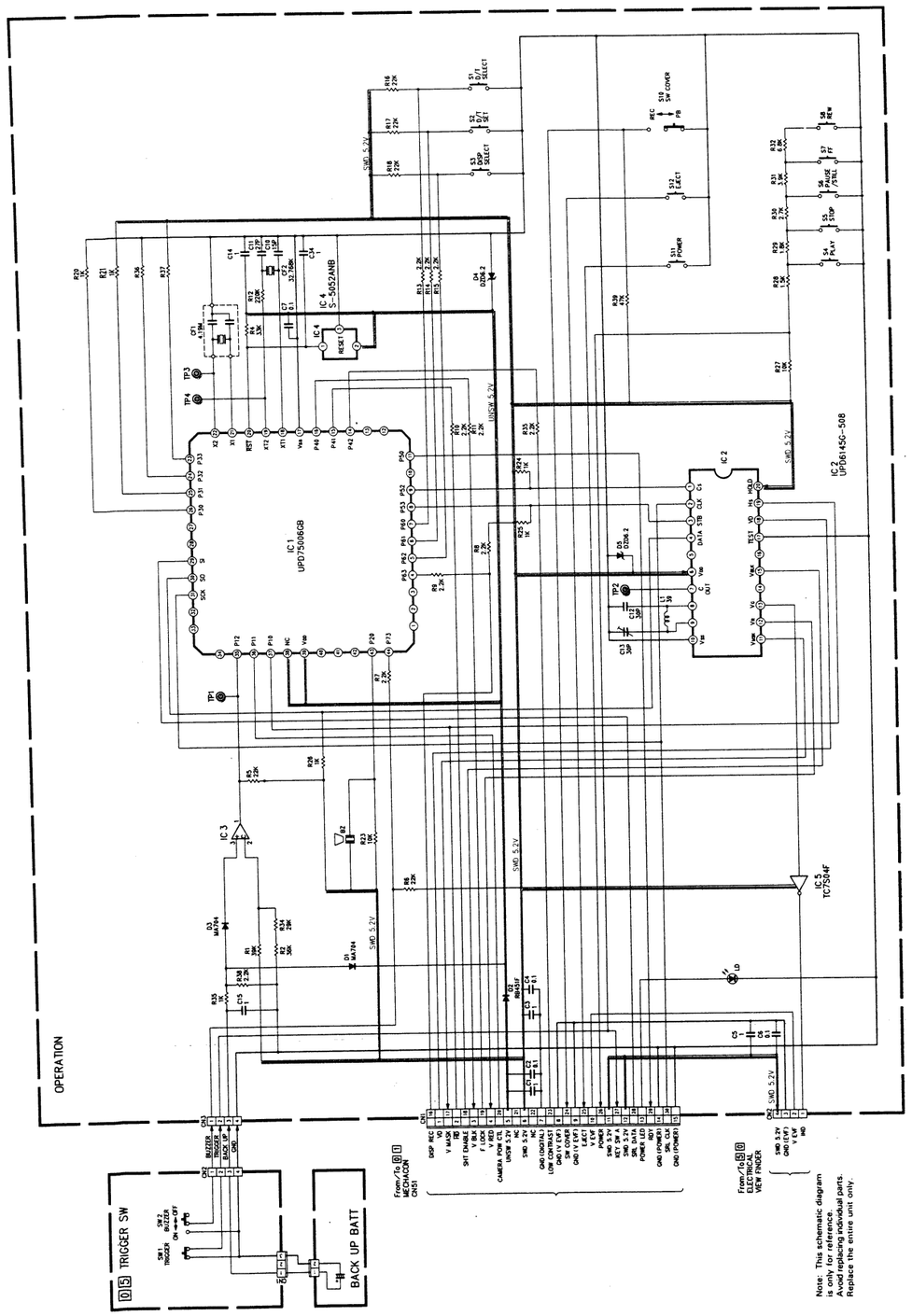


Monitor (Sucher) – Electronic viewfinder

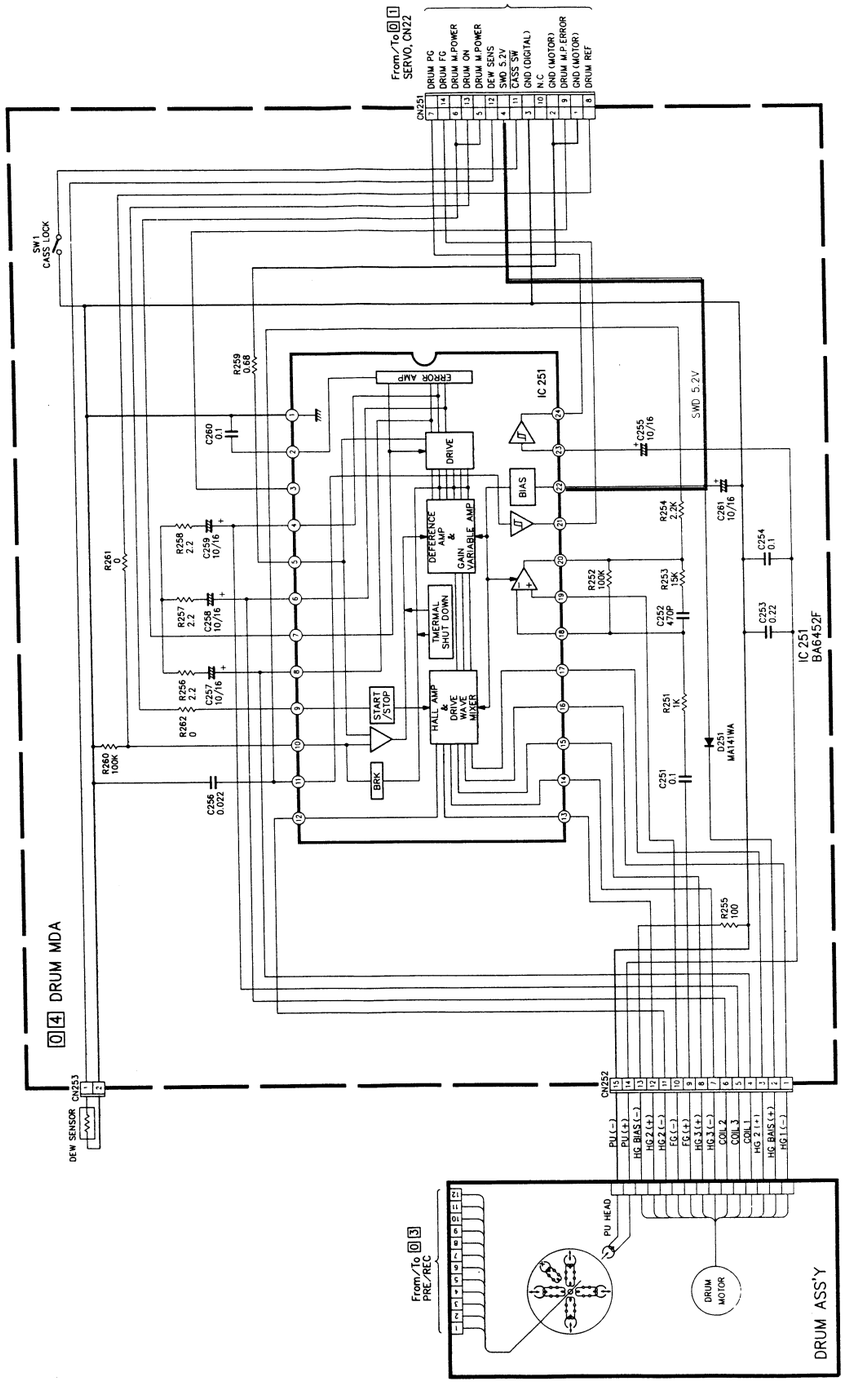


Note: This schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.

Bedienteil – Operation



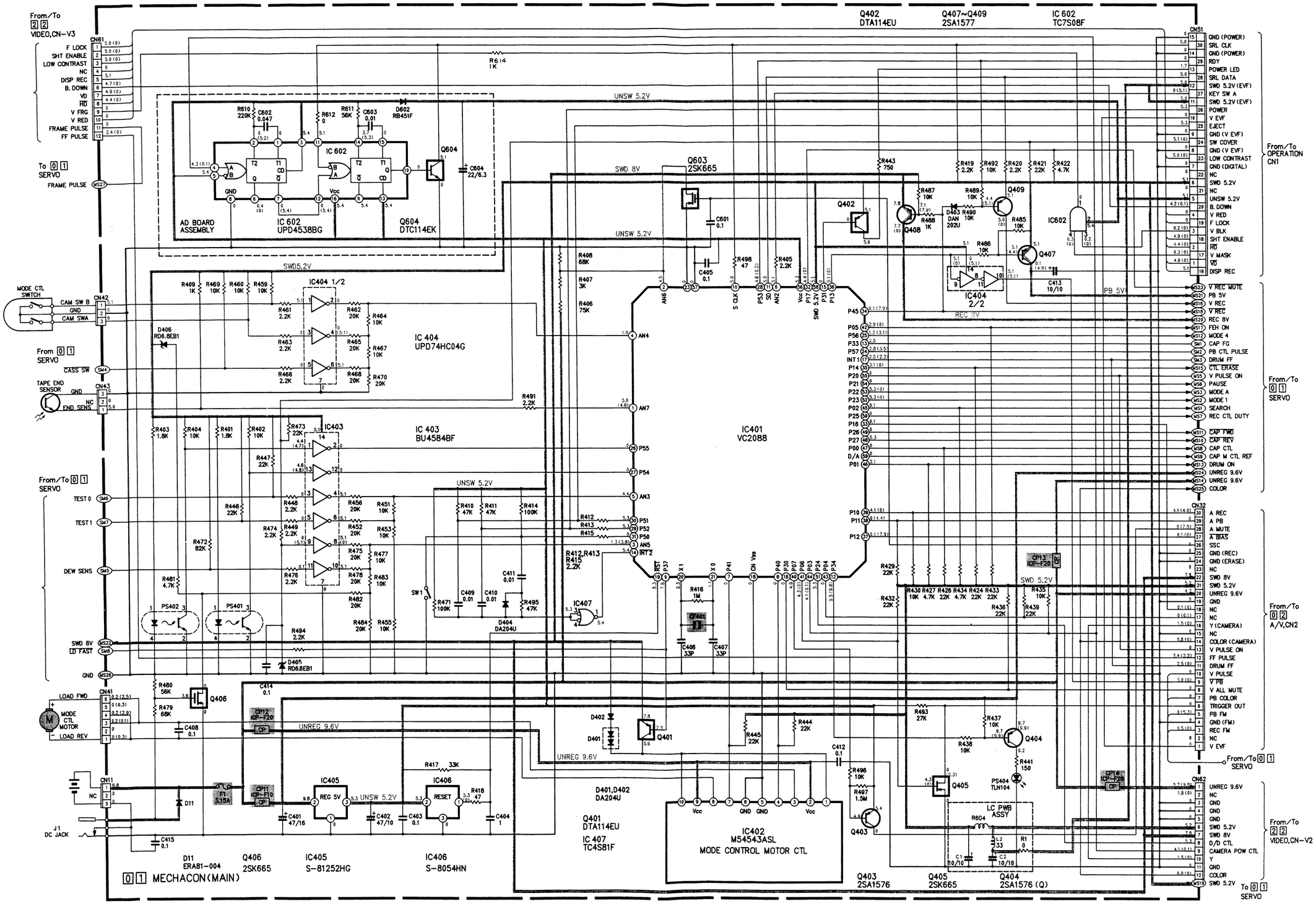
Trommel-Servo – Drum Servo



Mechaniksteuerung – Mechacon

• Voltage : DC-measured with a digital voltmeter during recording (SP mode) and play back (SP mode) with alignment tape. Where voltage differ between recording and playback, the voltage during playback is shown in parenthesis.

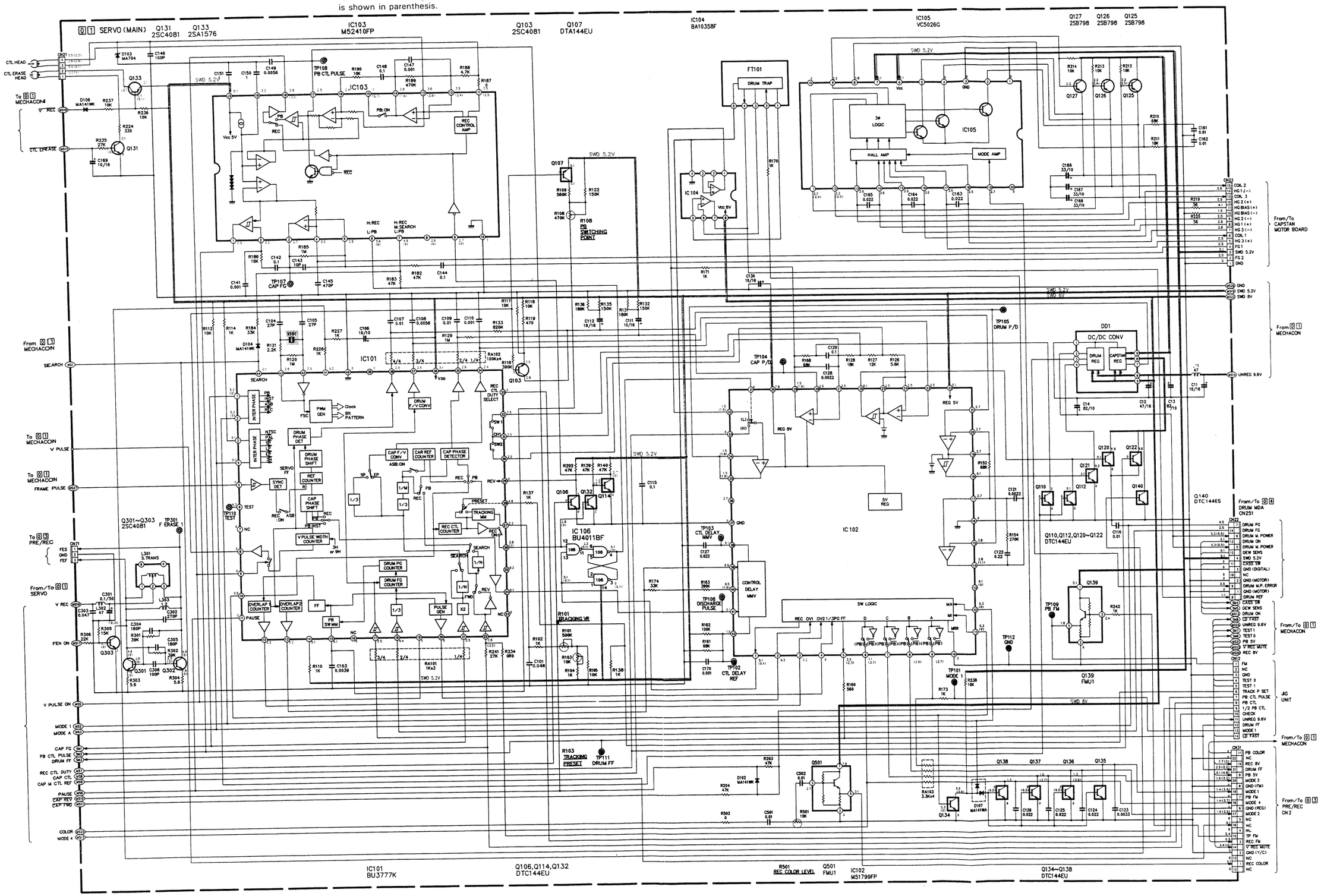
• Shaded (▒) parts are critical for safety. Replace only with specified part numbers.

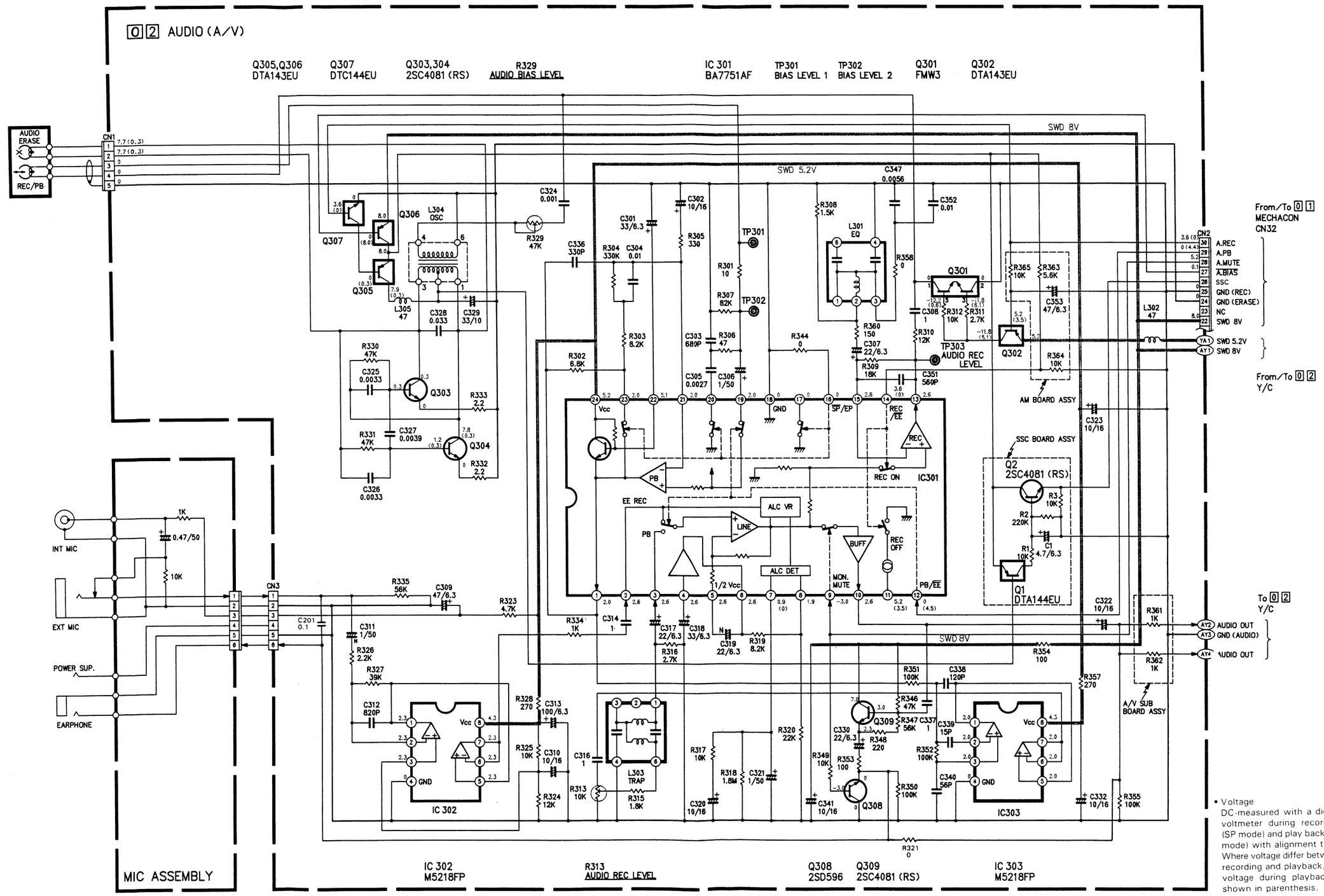


Servo – Servo

- Voltage : DC-measured with a digital voltmeter during recording (SP mode) and play back (SP mode) with alignment tape. Where voltage differ between recording and playback, the voltage during playback is shown in parenthesis.

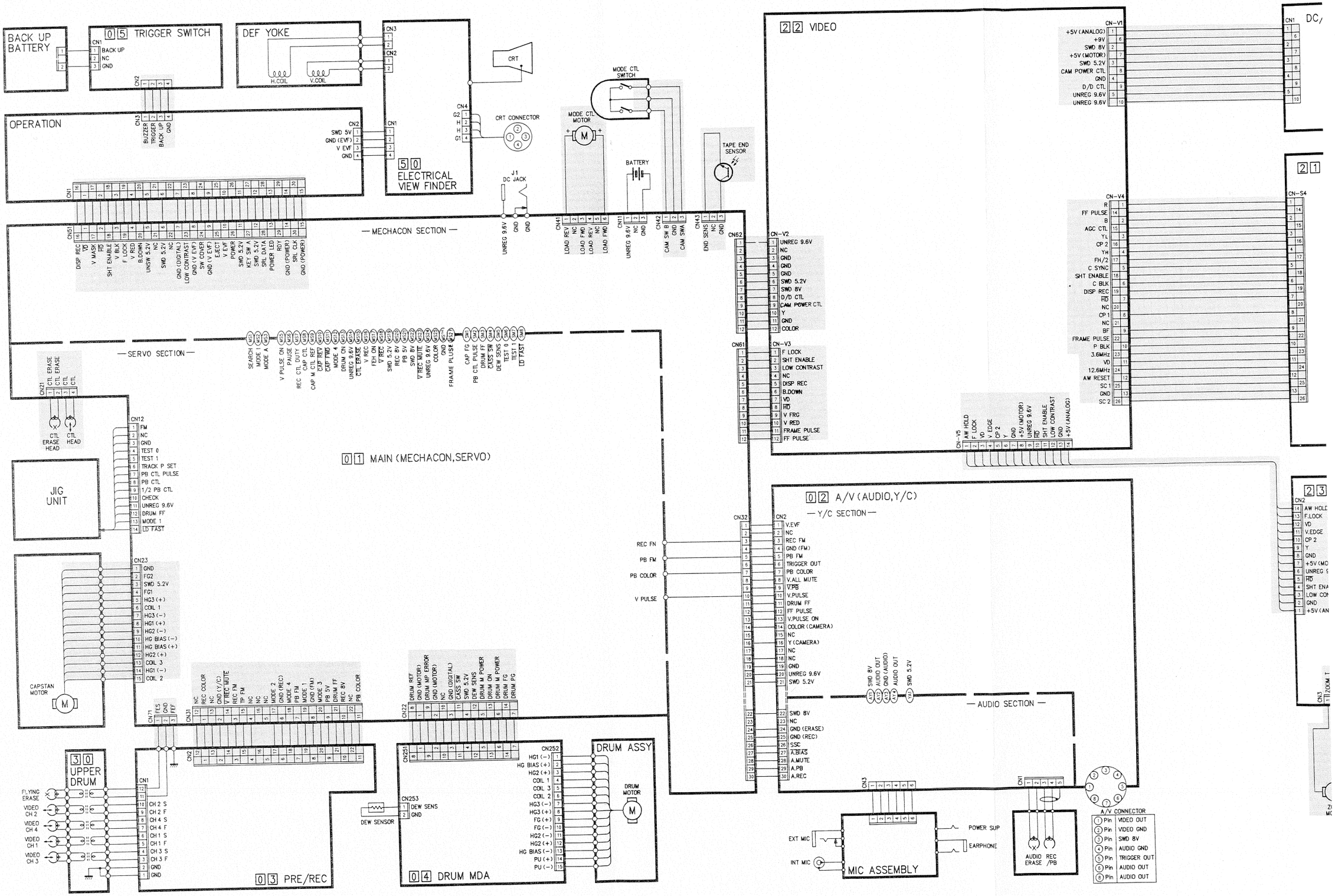
- Shaded (▒) parts are critical for safety. Replace only with specified part numbers.

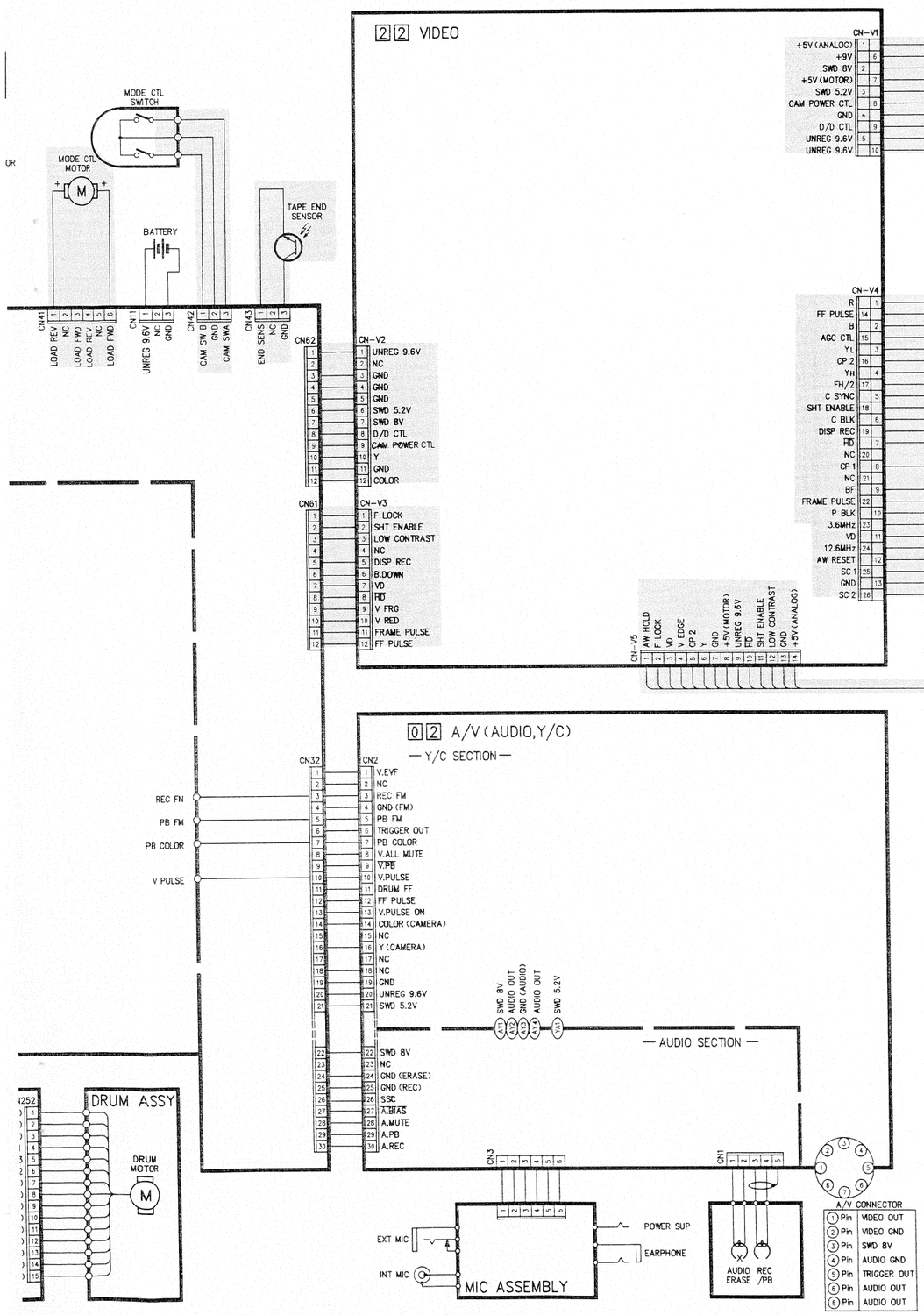




• Voltage
DC-measured with a digital voltmeter during recording (SP mode) and play back (SP mode) with alignment tape. Where voltage differ between recording and playback, the voltage during playback is shown in parenthesis.

Gesamtverdrahtungsplan – Overall wiring diagram



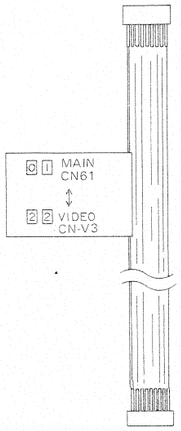

22 VIDEO
CN-V1
+5V (ANALOG)
+9V
SWD 8V
+5V (MOTOR)
SWD 5.2V
CAM POWER CTL
GND
D/D CTL
UNREG 9.6V
UNREG 9.6V
DC/DC CONVERTER
CN1
CN2
CNS1
GND
NC
+5V
+5V
+9V
21 IMS/SSG
CN-S4
CN-V4
R
FF PULSE
B
AGC CTL
YL
CP 2
YH
FH/2
C SYNC
SHT ENABLE
C BLK
DISP REC
HD
NC
CP 1
NC
BF
FRAME PULSE
P BLK
3.6MHz
VD
12.6MHz
AW RESET
SC 1
GND
SC 2
CN-S3
IRIS MOTOR
CN-S2
NC
DISP REC
NC
GND
MODE CTL SWITCH
MODE CTL MOTOR
BATTERY
TAPE END SENSOR
CN41
LOAD REV
NC
LOAD FWD
LOAD REV
NC
LOAD FWD
CN11
UNREG 9.6V
NC
GND
CN42
CAM SW B
GND
CAM SWA
CN43
END SENS
NC
GND
CN62
CN-V2
UNREG 9.6V
NC
GND
GND
GND
SWD 5.2V
SWD 8V
D/D CTL
CAM POWER CTL
Y
GND
COLOR
CN61
CN-V3
F LOCK
SHT ENABLE
LOW CONTRAST
NC
DISP REC
B.DOWN
VD
HD
V FRG
V RED
FRAME PULSE
FF PULSE
CN-V5
AW HOLD
F LOCK
VD
V EDGE
CP 2
Y
GND
+5V (MOTOR)
UNREG 9.6V
HD
SHT ENABLE
LOW CONTRAST
GND
+5V (ANALOG)
02 A/V (AUDIO, Y/C)
— Y/C SECTION —
CN32
CN2
V.EVF
NC
REC FM
GND (FM)
PB FM
TRIGGER OUT
PB COLOR
V.ALL MUTE
V.PB
V.PULSE
DRUM FF
FF PULSE
V.PULSE ON
COLOR (CAMERA)
NC
Y (CAMERA)
NC
NC
GND
UNREG 9.6V
SWD 5.2V
SWD 8V
NC
GND (ERASE)
GND (REC)
SSC
A.BIAS
A.MUTE
A.PB
A.REC
REC FM
PB FM
PB COLOR
V PULSE
SWD 8V
AUDIO OUT
GND (AUDIO)
AUDIO OUT
SWD 5.2V
— AUDIO SECTION —
CN3
CN1
EXT MIC
INT MIC
MIC ASSEMBLY
POWER SUP
EARPHONE
AUDIO REC ERASE /PB
A/V CONNECTOR
1 Pin VIDEO OUT
2 Pin VIDEO GND
3 Pin SWD 8V
4 Pin AUDIO GND
5 Pin TRIGGER OUT
6 Pin AUDIO OUT
8 Pin AUDIO OUT
DRUM ASSY
DRUM MOTOR
23 AF
CN2
AW HOLD
F.LOCK
VD
V.EDGE
CP 2
Y
GND
+5V (MOTOR)
UNREG 9.6V
HD
SHT ENABLE
LOW CONTRAST
GND
+5V (ANALOG)
CN7
F LOCK
SHUTTER
GND
CN3
ZOOM T
ZOOM W
CN1
CN4
ZOOM (TELE)
ZOOM (WIDE)
GND
CN5
+5V
LED
PHOTO IR
+5V
CN6
+5V
FGENCODER
GND
ZOOM MOTOR
AF MOTOR
WIDE
TELE
ZOOM SWITCH
SENSOR
ZOOM ENCODER

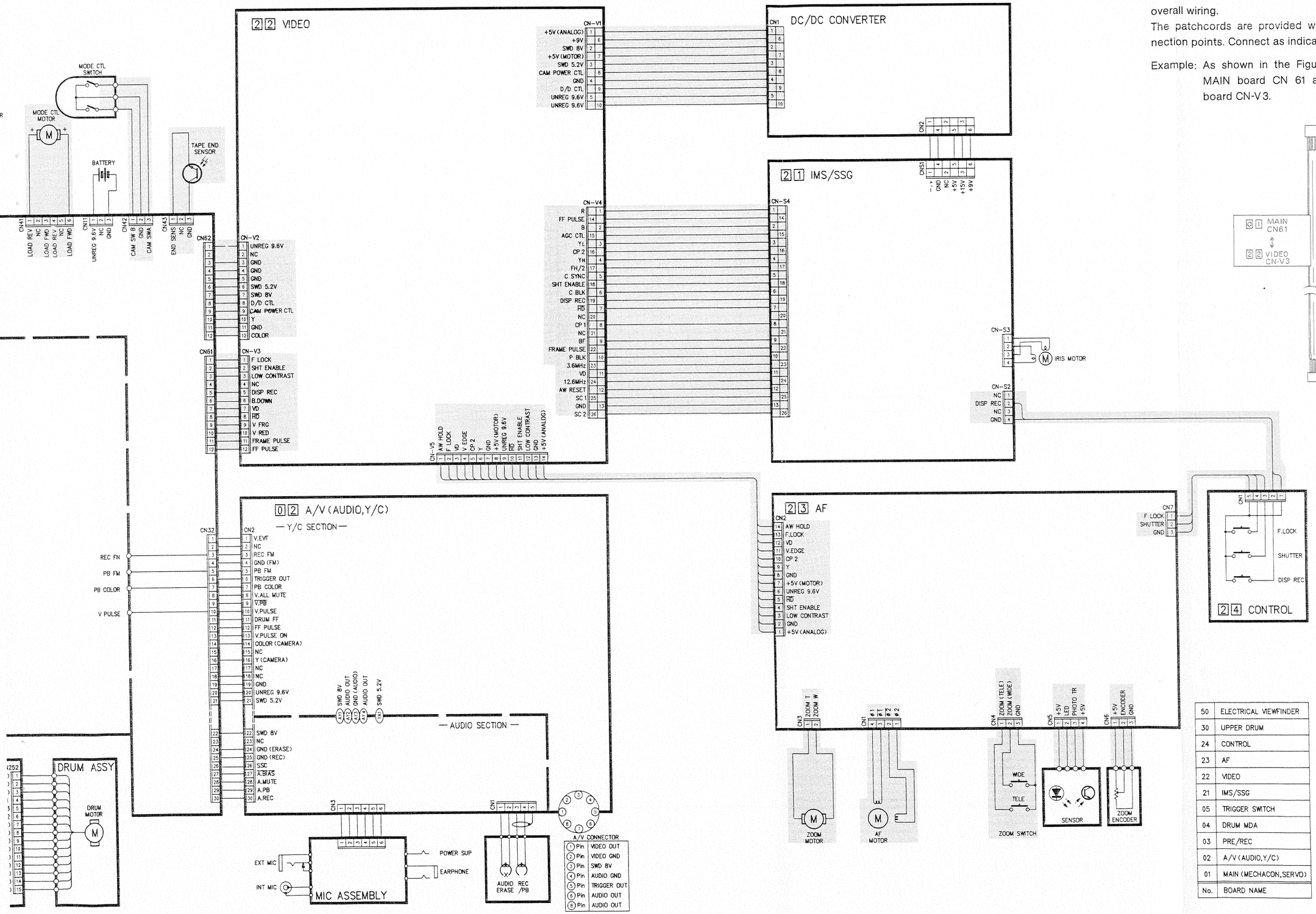
Patchcords

Patchcords are available for grey shaded portions of the overall wiring.

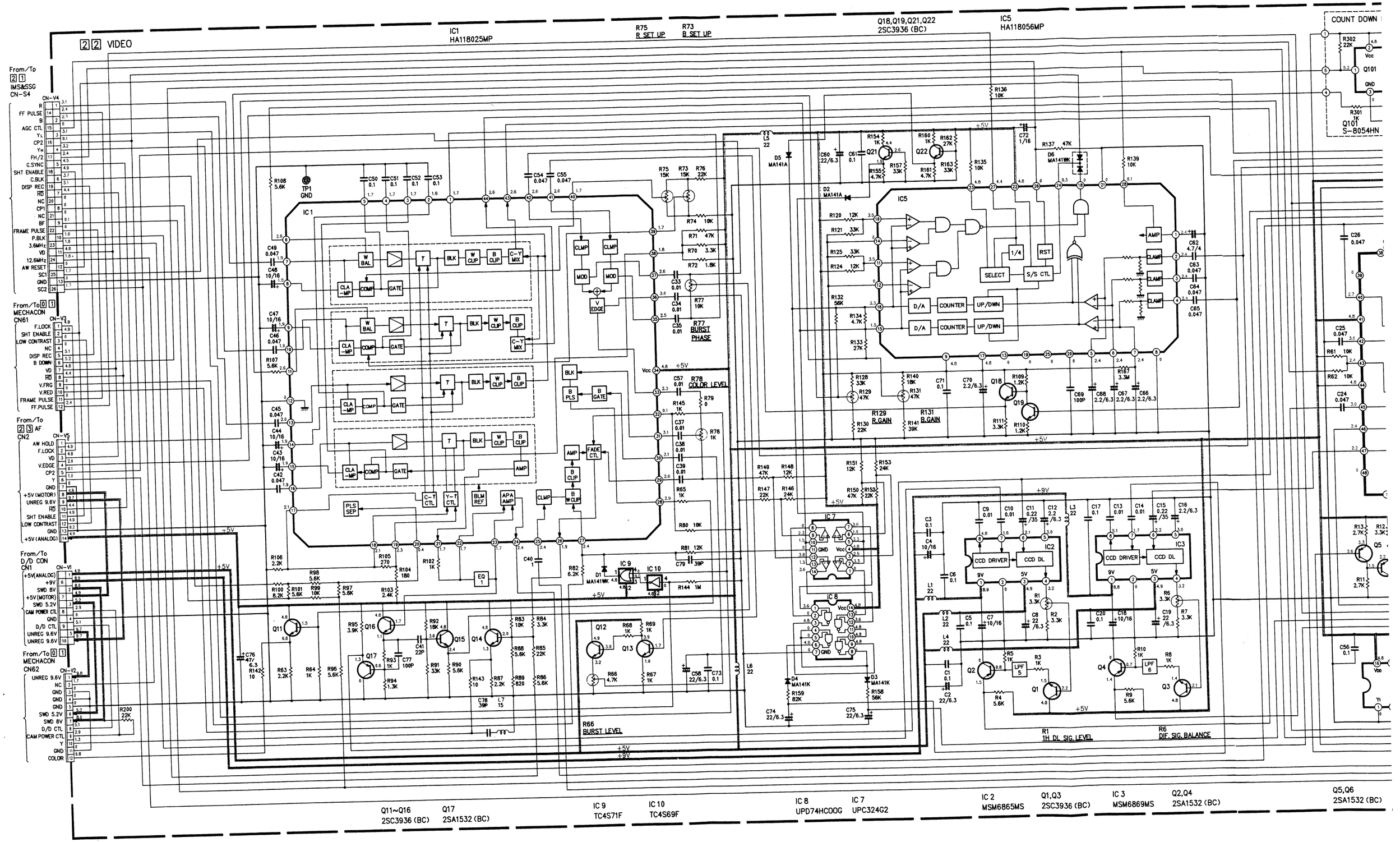
The patchcords are provided with tags to indicate connection points. Connect as indicated.

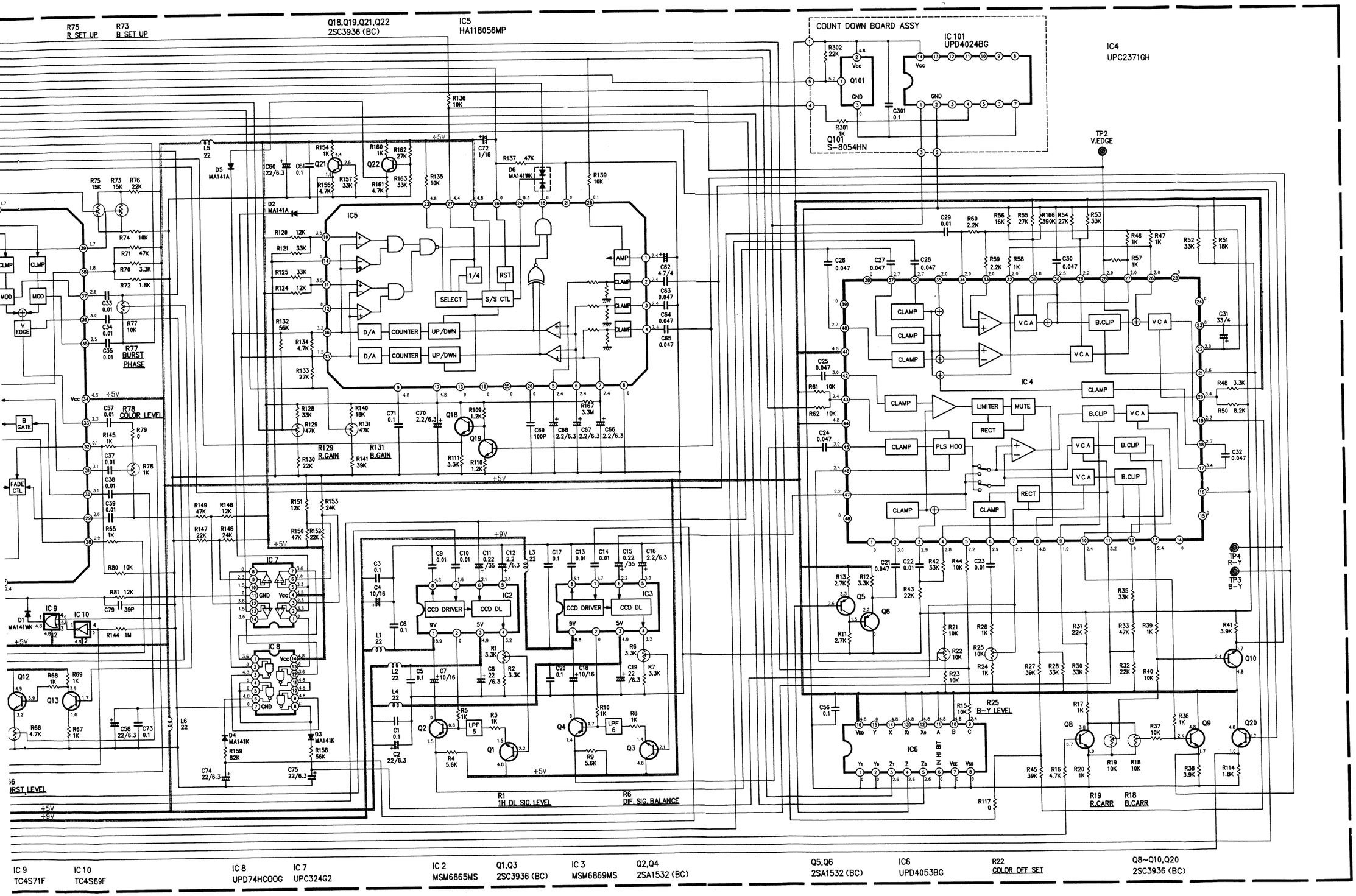
Example: As shown in the Figure, connect one side to MAIN board CN 61 and the other to VIDEO board CN-V3.





50	ELECTRICAL VIEWFINDER
30	UPPER DRUM
24	CONTROL
23	AF
22	VIDEO
21	IMS/SSG
05	TRIGGER SWITCH
04	DRUM MDA
03	PRE/REC
02	A/V (AUDIO,Y/C)
01	MAIN (MECHACON,SERVO)
No.	BOARD NAME

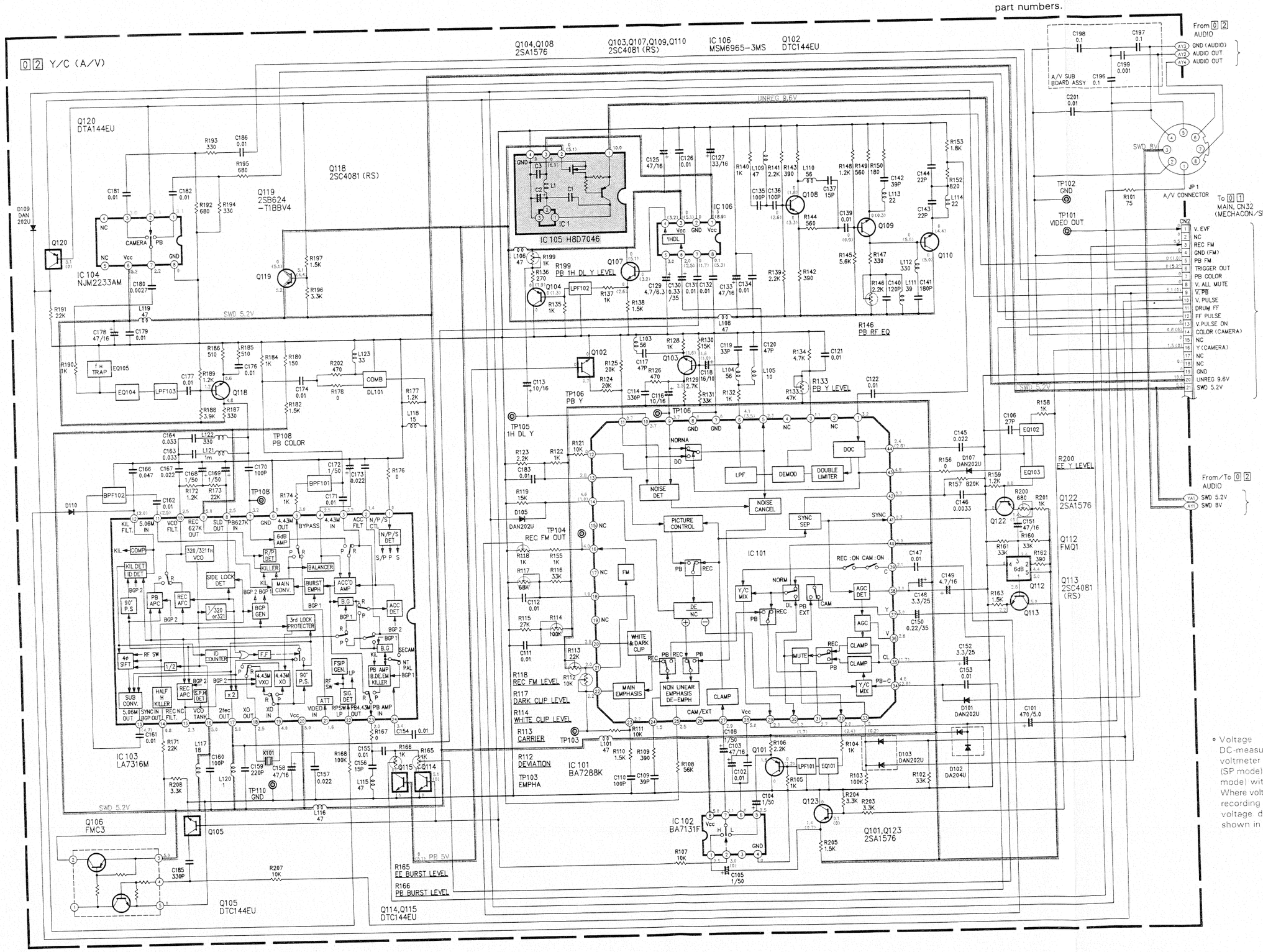

2 2 VIDEO
IC1
HA118025MP
R75
R SET UP
R73
B SET UP
Q18,Q19,Q21,Q22
2SC3936 (BC)
IC5
HA118056MP
From/To
2 1
IMS&SSG
CN-S4
From/To 0 1
MECHACON
CN61
From/To
2 3 AF
CN2
From/To
D/D CON
CN1
From/To 0 1
MECHACON
CN62
COUNT DOWN
Q101
S-8054HN
R66
BURST LEVEL
R129
R.GAIN
R131
B.GAIN
R1
1H DL SIG. LEVEL
R6
DIF. SIG. BALANCE
Q11~Q16
2SC3936 (BC)
Q17
2SA1532 (BC)
IC 9
TC4S71F
IC 10
TC4S69F
IC 8
UPD74HC00G
IC 7
UPC324G2
IC 2
MSM6865MS
Q1,Q3
2SC3936 (BC)
IC 3
MSM6869MS
Q2,Q4
2SA1532 (BC)
Q5,Q6
2SA1532 (BC)



IC 9	IC 10	IC 8	IC 7	IC 2	Q1,Q3	IC 3	Q2,Q4	Q5,Q6	IC6	R22	Q8~Q10,Q20
TC4S71F	TC4S69F	UPD74HC00G	UPC324G2	MSM6865MS	2SC3936 (BC)	MSM6869MS	2SA1532 (BC)	2SA1532 (BC)	UPD4053BG	COLOR OFF SET	2SC3936 (BC)

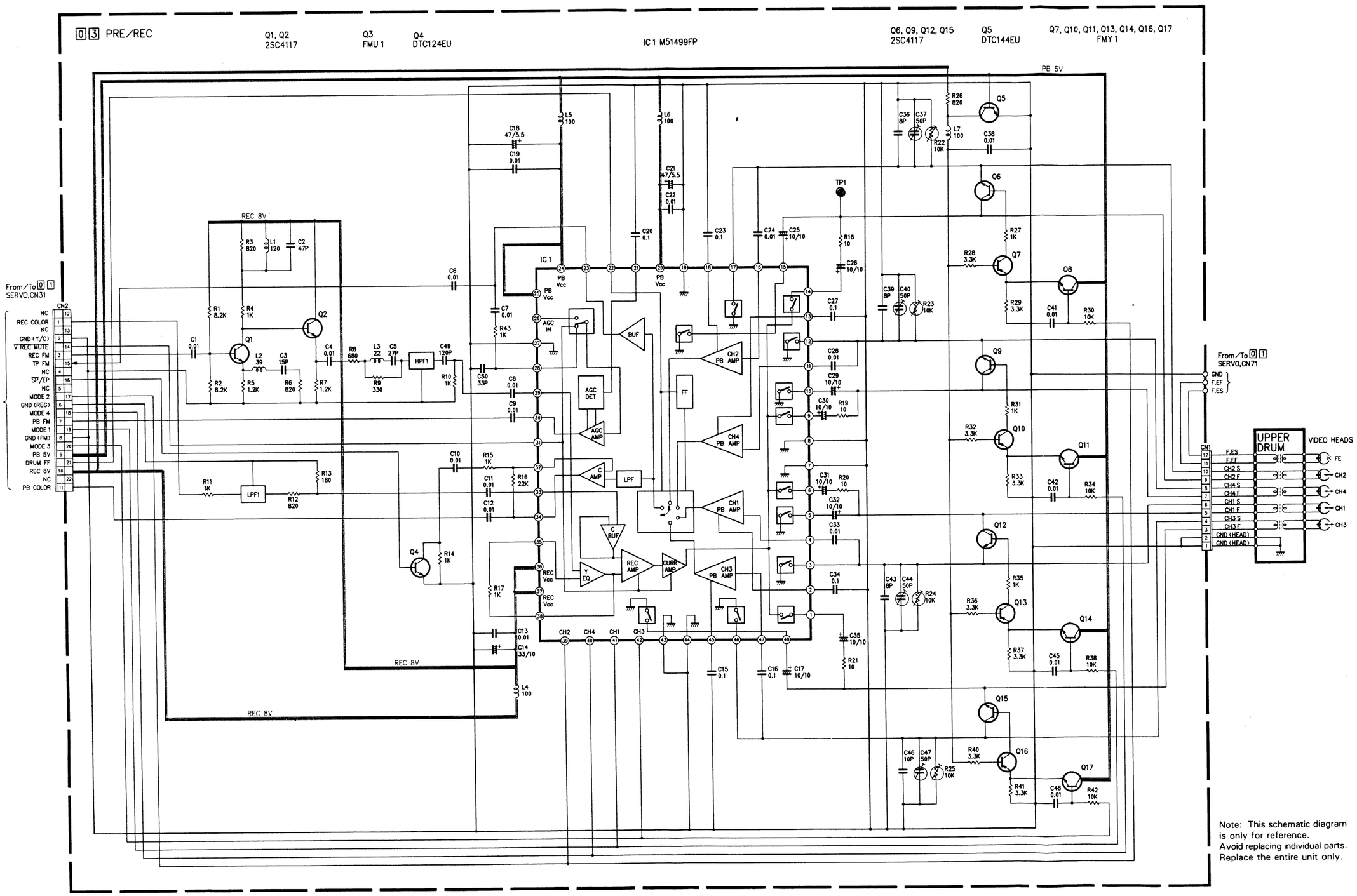
Video Y/C – Video Y/C

• Shaded ( ) parts are critical for safety. Replace only with specified part numbers.



• Voltage
DC-measured with a digital voltmeter during recording (SP mode) and play back (SP mode) with alignment tape. Where voltage differ between recording and playback, the voltage during playback is shown in parenthesis.

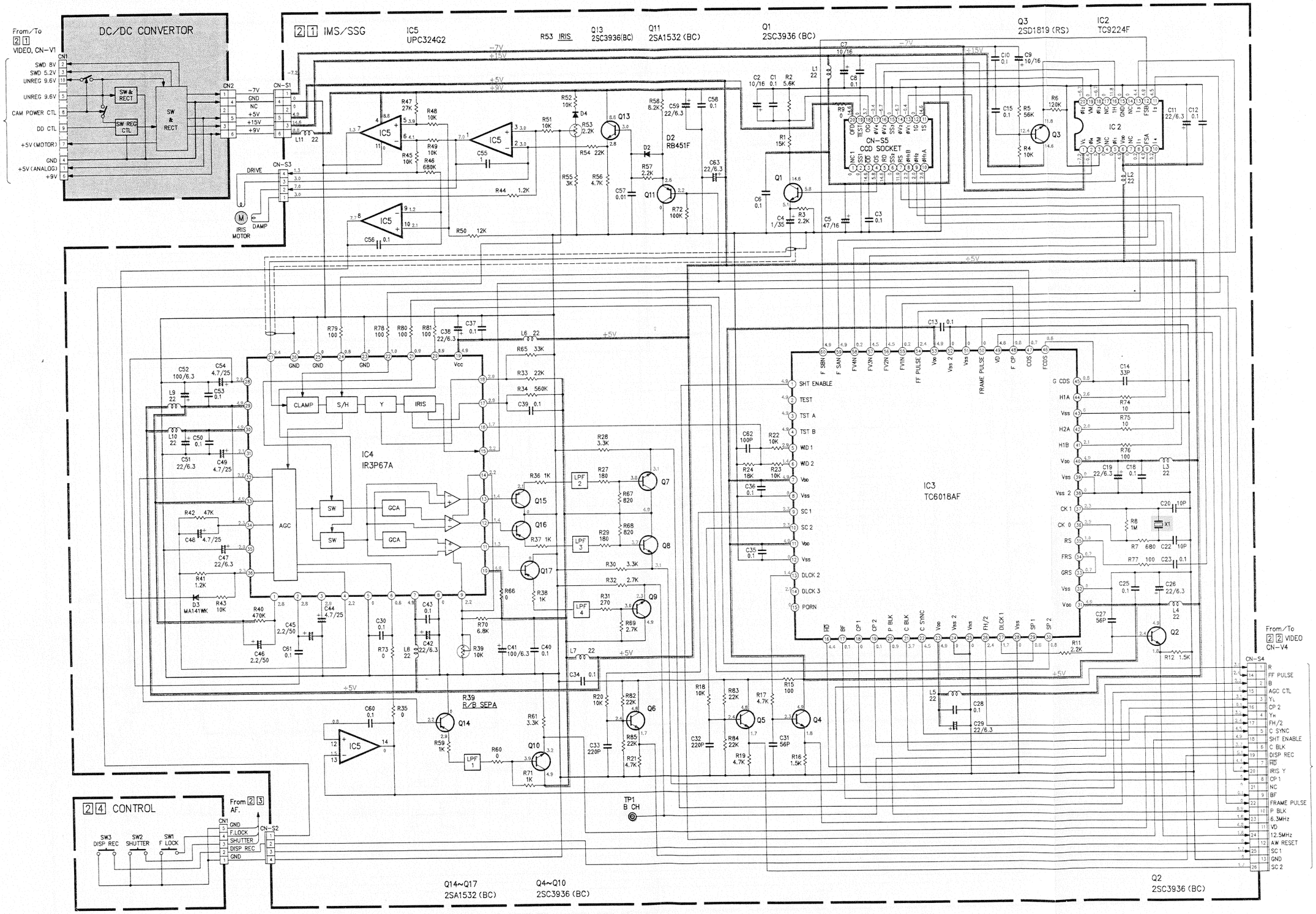
Vor- und Aufnahmeverstärker – Pre, record amplifier



Note: This schematic diagram is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

Bildwandler/Synchron-Signal-Generator – Imager/Sync Signal Generator

Shaded ( ) parts are critical for safety. Replace only with specified part numbers.



Autofocus – Autofocus

• Voltage : Measured as the grey scale pattern which lighted up brightly is shot in the Rehersal mode.

Shaded ( ) parts are critical for safety. Replace only with specified part numbers.